under the terms of the estates acquired for the subordination of minerals, and will periodically inspect all mining activities to insure compliance with the terms of the subordination agreement and any plan incorporated by reference into such agreement.

- (d) Off-Project Mineral Activity. In connection with all drainage basins, where there is present or potential mineral activity upstream from a project or nearby lands outside the project limits, the District Engineer will:
- (1) Establish and maintain liaison with Federal and State agencies having responsibility for the regulation of mineral activities and the control of environment in order to prevent adverse effects of mining on the project.
- (2) Institute a system for monitoring adverse effects on the project such as sedimentation and acid drainage.
- (3) Take steps to insure that Corps personnel in charge of the project are familiar with State and Federal laws governing the control of mineral recovery and the environment, as well as the Federal or State agencies responsible for the enforcement of such laws.
- (4) Division and District Engineers are requested to use the Refuse Act of 1899 and any other legal remedies that may be appropriate in a particular situation in order to protect the interests of the United States and preserve the integrity of the project.

§644.6 Feasibility Reports and Design Memoranda.

(a) Feasibility Investigations and Reports. Survey investigations and reports are the studies and reports, specifically authorized by Congress and made by Division and District Engineers as assigned by the Chief of Engineers, to determine the scope, justification, and degree of Federal interest in protection and development of harbors, waterways, shores and beaches, and river basins. For water resource projects the reports include determination of needs of alternative plans of protection and development to be considered for recommendation to Congress for authorization as Federal projects. Survey reports should clearly specify real estate requirements, both immediate and prospective, and the responsibilities of Federal and non-Federal agencies relative thereto. The real estate estimates in the reports should be recent enough to be meaningful for the purpose intended. Documentation regarding the estimates, such as when and by whom made, nature and extent of field investigation, search for comparable sales and similar factual material, shall be maintained.

(b) Phase I and Phase II General Design Memoranda. (1) The General Design Memorandum (GDM) is a report on an authorized project. Its form and content are set forth in ER 1110-2-1150. It includes a real estate section, which consists of a general discussion of real estate requirements for the project, recommendations as to estates to be acquired, a gross appraisal of the necessary land and interests therein, and other features considered desirable to present all major real estate problems and to recommend solutions. Subject to the availability of data, minerals in the project area should be covered in the manner set forth in §644.5. Detailed sales data are not necessary, but may be included if it is anticipated that recommendations will be made for early acquisition of interior tracts.

(2) Real Estate personnel will prepare the real estate section of the GDM. The requirements for current real estate estimates and necessary documentation thereof contained in §644.6(a) are also applicable to this paragraph.

(c) Real Estate Design Memoranda. (1) Following approval of the Phase I GDM, a Real Estate Design Memorandum (REDM) will be prepared by the Division or District Engineer. Approval of the REDM shall be in accordance with ER 1110-2-1150, para 21b(2)(j). No land shall be acquired for the project without approval of the initial REDM except (i) in the case of an advance land acquisition situation, (ii) acquisition for local cooperation project, or (iii) when a letter-type REDM has been submitted. The REDM will include the following in the order set forth below:

(A) A statement that this REDM is tentative in nature for planning purposes only and that both the final real property acquisition lines and the estimate of value are subject to change even after approval of this REDM.

(B) Project authorization, designation, location and date of approval of

GDM Phase I, including the Recreation Resources Appendix (App A, ER 1110-2-1150).

- (C) General description of the area and estimated total acreage. The total acreage will be broken down as to fee and easement areas. The fee will be further broken down to indicate, separately, the estimated acreage required for the various authorized project purposes.
- (D) If any Government-owned land is within the area, indicate the Government's estate, degree of interest required for project purposes, and views of the local representative of the controlling agency as to use for project purposes (see Act of July 26, 1956 (70 Stat. 656) with respect to national forest land).
- (E) Appraisal information containing a general statement as to character, present use and highest and best use of the land, local economic conditions which may affect the trend of real estate values in the community and the gross estimate of value for the area to be acquired under the REDM. The gross appraisal on which this estimate is based should be forwarded concurrently to HQDA (DAEN-REE) WASH DC 20314.
- (F) Information necessary to ascertain responsibility under Pub. L. 91-646 including but not limited to the following:
- (1) The number of persons, farms and businesses to be displaced.
- (2) An estimate of all costs, including contingencies to be incurred as a result of compliance with Pub. L. 91-646. Part 641 of this subchapter sets out the items to be considered in estimating these costs.
- (3) Information regarding the availability of replacement housing.
- (G) Estimated cost to the United States of lands, easements, and rights-of-way necessary for acquisition by the United States for:
- (1) Access roads to project area. A statement will be included as to whether existing public roads will be utilized within the purview of 33 U.S.C. 701r-1 or new rights-of-way for access roads will be acquired, with the estimated cost of such new rights-of-way. The proposed plan of access during construction will be fully described.

- (2) Relocation of highways, roads, railroads, pipelines, and utilities (ER 1180-1-1, Section 73). Statement will be included as to whether the Government or the owner(s) will acquire new rights-of-way, if any, necessary for the various relocations.
- (H) Number of structures and facilities which will come within the purview of section 111 of the Act of Congress approved July 3, 1958 (Pub. L. 85-500), and a preliminary estimate of Government costs (ER 1180-1-1, Section 73).
- (I) A study, in accordance with §644.5, of present or anticipated mineral activity in the vicinity of the project which may affect the operation thereof. A recommendation including cost estimate, if applicable, regarding the acquisition of the minerals should also be included in this section of the REDM.
- (J) A discussion of standing timber and other vegetative cover in proposed recreation areas and other areas above the conservation pool which have recreation or scenic value. Recommendations should be made as to the significance of such timber and cover and as to whether reservation of standing timber should be permitted in the various parts of the fee area.
- (K) A map(s) showing the area which is the subject of the REDM, indicating the acquisition guide line, contour line, the tentative blocked out fee line, multipurpose pool, and lands in which the acquisition of easements is ommended. The map(s) will show, where appropriate, the dam site, construction area, borrow areas, spoil areas, public access areas, fish and wildlife areas, and recreation areas. In addition, the appropriate map(s) will have outlined thereon the items of construction or major project features. Access roads and railroad rights-of-way required for these areas will also be shown. Chapter 3 of ER 405-1-12 relates to the preparation of maps. With respect to a project where it is planned to submit several REDMs covering portions of the project, the initial REDM will contain a map showing the entire project, with the information shown thereon as indicated above, insofar as this information covering the entire project is then available. All subsequent REDMs will contain the same